attend and support the Lord Mayor. The following resolutions will be moved:—

1. "That this meeting desires to express the gratitude of the people of Great Britain and Ireland to M. Pasteur and the staff of the Institut Pasteur for the generous aid afforded by them to over 200 of our fellow-countrymen suffering from the bite of rabid dogs."

2. "That this meeting, having heard the statement of Sir James Paget and others, records its conviction that the efficacy of the anti-rabic treatment discovered by M. Pasteur is demonstrated, and requests the Lord Mayor to establish a fund for the double purpose of making a suitable donation to the Institut Pasteur, and of providing for the expenses of British subjects unable to pay the cost of a journey to Paris when bitten by rabid animals."

3. "That this meeting, whilst recognizing the value of M. Pasteur's treatment, and taking steps to provide for its accessibility to Englishmen who may hereafter be bitten by rabid animals, is of opinion that rabies can easily be stamped out in these islands, and calls upon the Government to introduce at once a Bill for the simultaneous muzzling of all dogs throughout the British Islands, as provided in the measure drafted by the Society for the Prevention of Hydrophobia."

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## *NOTES.*

THE King of Sweden has invited Prof. Max Müller, the representative of Oxford, to be his guest at the Royal palace in Stockholm during the forthcoming Congress of Orientalists. Some 500 foreign members will attend the Congress. During the visit to Christiania, King Oscar will give a banquet to the members of the Congress at his villa at Bygdö, and the city has voted the necessary funds for a civic entertainment.

PROF. A. C. HADDON, whose movements in the Torres Straits we have from time to time recorded, is now on his way home. Contrary to the expectations of his friends and well-wishers, illness has overtaken him; but, as he writes from Brisbane, hope for the best would appear justifiable. He has worked indefatigably during his sojourn in the tropics, and has accumulated a vast collection, the greater part of which is now safely delivered.

MR. HENRY WILLIAM BRISTOW, F.R.S., died on Friday last at the age of seventy-two. In 1842 he was appointed a member of the staff of the Geological Survey of the United Kingdom. Mr. Bristow published various works on mineralogy and geology, and was the author of the mineralogical articles in Brande's "Dictionary of Science, Literature, and Art," and of articles on minerals and rocks in Ure's "Dictionary of Arts, Manufactures, and Mines." He became a Fellow of the Geological Society in 1843, and of the Royal Society in 1862, and an honorary Fellow of King's College, London, in 1863. He received the diploma of the Imperial Geological Institute of Vienna, and from the King of Italy the diploma and insignia of an officer of the Order of SS. Maurice and Lazarus.

SIR JOHN LAWES entertained the members of the Lawes Agricultural Trust Committee at Rothamsted on Friday last. In the afternoon the Committee inspected the experimental farm and the laboratories connected with it.

THE Geologists' Association propose to organize a geological excursion to the volcanic regions of Italy—Naples, Sicily, and the Lipari Islands, or to some of these places if not to all of them—during the month of October next. This excursion, in which ladies may take part, is not confined to members of the Association, and at the meeting of the Geological Society on June 5, Prof. Judd announced that the authorities of the Geologists' Association particularly invite the attendance of Fellows of the Geological Society.

A ROSE CONFERENCE will be held in connection with the Royal Horticultural Society at Chiswick on July 2 and 3. According to the official programme, the objects of the Conference are "to get together as large and as representative a collection of roses of all descriptions as possible; to form an Exhibition of all subjects pertaining to the rose, whether in its botanical, its horticultural, its literary, or its artistic aspects; and to bring together for the purposes of reciprocal information and fellowship all those interested in the rose and its culture." The Royal Horticultural Society appeal to lovers of the rose to help them to attain these ends.

ON Wednesday, July 10, the annual meeting of the Society of Chemical Industry will take place in the theatre of the Royal Institution at 11 a.m. In the evening the President will hold a reception and *conversazione* in the Grosvenor Gallery. On the two following days there will be various visits and excursions, and on the evening of July 11 the annual dinner of the Society will be held.

IN connection with the bequest of the late Dr. Swiney, Prof. W. R. McNab, of the Dublin College of Science, will begin a course of twelve lectures on fossil plants at the Natural History Museum, Cromwell Road, on Monday, the 24th inst. The subject will be continued from the course of last year, and will include the Ferns and Gymnosperms of the Palæozoic and Mesozoic epochs, and the dawn of the Angiospermous flora. The lectures will be given on Mondays, Wednesdays, and Fridays at half-past four o'clock, and will be free to all visitors to the Museum.

THE Indian Government has purchased the coins collected by the Afghan Boundary Commission. They are over 4600 in number, and are to be catalogued by Mr. C. J. Rogers, of Amritsar.

THE Russian Academy of Sciences offers a prize of 5000 roubles (£500) for the best inquiry into the nature and effects of the poison which develops in cured fish. The objects of competitors must be: "(1) To determine, by means of exact experiments, the physical and chemical nature of the poison which develops in fish; (2) to study, by experiments on animals, its action upon the heart, the circulation of the blood, the organs of digestion, and the nervous system; (3) to determine the rapidity of its absorption by the digestive organs; and (4) to study and describe the characteristics which may serve to distinguish contaminated fish from such as are not contaminated." The fifth and sixth questions, with which it may be impossible for any one to deal satisfactorily, relate to the means of preserving fish from the development of the poison, and to the question of counter-poisons and the medical treatment of poisoned persons. The competition is open to all. The memoirs must be sent in, either in manuscript or printed, before January 1, 1893, and may be written in any one of the following languages: Russian, Latin, French, English, German. If none of the papers is deemed worthy of the full prize, the accumulated interest upon the above-named sum may be handed over to the author who presents the best solution of some part of the problem.

A RECENT issue of the French *Journal Officiel* contains the Report of the Consultative Committee for Sea Fisheries in France on the subject of poisoning through the eating of mussels. The Committee, in the first place, recognize that the oysters which cause poisoning are those which have become stale, or have been kept in water rendered foul by decomposed organic matter, and question whether the same may not be the case with regard to mussels. Various explanations of mussel poisoning were made to the Committee. By some it was attributed to a parasite crab (*Pinnotheres pisum*). This explanation, however, was unsatisfactory, for in the United States this *Pinnotheres* is sought after as food. By others, the presence of the poison was attributed to the spawn of star-fish, and also to copper absorbed from wrecks. Both these suggestions were, however, disproved. The theory of Orfila, also, that the poisonous action of the mussels in the stomach is the result of imagination, does not find acceptance at the hands of the Committee. An authority on the subject has found that the mussels lose their poisonous property if cooked for a period of ten minutes with carbonate of soda. The Committee conclude that the poisonous nature of the mussels is due to the presence in them, especially in the liver, of a volatile organic alkaloid (*mytilotoxine de Brieger*), developed under the influence of a particular microbe, which is only found in mussels living in stagnant and polluted waters. Finally, they advocate the removal of all restrictions on mussels in artificial beds, and recommend the sale at all times, at fish markets, of mussels coming from such beds, which are usually situated in favourable localities, a sale which is at present prohibited in France during May and June.

MR. TUPPER, the Canadian Minister of Marine and Fisheries, is reported to be now arranging for the establishment at Halifax of an Intelligence Department, for the purpose of supplying fishermen on the Atlantic coasts with information as to the movement of the various food and bait fishes. Bulletins will be issued frequently upon the subject, and will be widely circulated, and in addition fishermen will always be able to obtain, by means of a telegram or letter, any reasonable information they may require regarding their industry.

THE Cornell University has found in Mr. Henry W. Sage, of Ithaca, a friend whose good-will reveals itself in a very practical manner. A suit is now going on, involving $1,500,000, bequeathed to the library of Cornell. In the event of the suit being lost, Mr. Sage proposes to pay for the library building—to cost over $200,000—on which work has begun; and also to give the library an endowment of $300,000. Should the suit be won, as is confidently expected, Mr. Sage's half a million will probably go to the University for other purposes. *Science* says that the giving of this sum will make Mr. Sage's benefactions to the University amount to about $1,000,000 in cash. The institution also owes much to him for counsel and services.

ON June 12, Dr. A. B. Meyer, of the Zoological and Ethnographical Museum at Dresden, received from Prince Ferdinand of Bulgaria a telegram announcing that immense numbers of the bird called *Pastor roseus*, L., had arrived some days before at Knjajevo, near Sofia, and were still there. The usual haunts of *Pastor roseus* are in the valleys of the Danube, in South Russia, and in the neighbouring districts of Asia; but this year it seems to have extended its range, and Dr. Meyer announces that he will be glad to receive any information that may be sent to him as to its appearance in new neighbourhoods. Between 1774 and 1875 the bird is said to have been seen in Germany thirty-one times, in Switzerland sixteen times. In June 1884 it was seen in Bavaria, and in the autumn of the same year in Würtemberg. It appeared again in Bavaria in May 1886. Until the other day it has not visited Bulgaria since 1876.

A LARGE meteoric stone which recently fell in Scania has been acquired by Baron Nordenskiöld for a sum of £84 for the National Museum.

ON May 31, about 11 p.m., a brilliant meteor was seen at Ljungby, near the Sound. It went in a direction east to north, emitting a bright red colour, and was accompanied by a distinctly audible hissing.

IN reference to the destructive volcanic eruption on the Island of Oshima (better known to the Western world as Vries Island), of which information has been telegraphed from San Francisco, it seems that the first news of it was brought to Yokohama by the master of a passing steamer, who described the mountain Miharaizan as being in fiercely active eruption on the morning of April 13. The eruption was of such a nature that it attracted attention on board the steamer at a great distance. Afterwards it was ascertained that the outbreak was at the western base of the mountain. From this it would appear that a new crater has been formed, as the old crater is at the top of the mountain, though there is a place to the south-west whence smoke is always issuing from the sands. The *Japan Weekly Mail*, from which this information is taken, gives the following historical account of this remarkable volcanic island. Miharaizan, according to the oldest Japanese historical records, was an active volcano so far back as 684 A.D., but the earliest authentic notice of its activity appears to have been taken in 1421, when the sea boiled, and the fish died in shoals. In 1684 an eruption commenced which lasted seven years, and in 1703 there was a great earthquake and tidal-wave, and part of the island broke down and formed the present harbour. In 1777 the mountain was in active eruption, and the island was covered several inches deep with ashes, such phenomena being almost constantly repeated from that date till 1792. It was then quiet till 1837, and more or less in action for the following twenty years. Another lull then took place, when, in 1868, it again broke out, and continued in action four days. The next eruption occurred in 1876, and lasted nearly two months. The most destructive eruptions of Miharaizan were probably those of 1781 and 1789, as, during the latter, the village of Shimotaka was entirely destroyed, and the people and their houses were completely buried in ashes. There are at present six villages on the island, containing a population of 5000 persons, mostly fishermen.

REPORTS from New Zealand describe a recurrence of volcanic activity in Mount Ruapehu. On April 29 an enormous cloud of steam was seen ascending from the summit. There is said to be every indication that considerable thermal activity is going on in the hot lake on the summit, as the outburst was of the nature of a colossal geyser ascending rapidly and subsiding in a few minutes. Since the terrible eruption at Tarawera in 1886, any new outburst, of however trifling a character, naturally gives cause for much alarm all along the belt of volcanic country from Rotorua to Tongariro and Ruapehu.

THE Pilot Chart of the North Atlantic Ocean, published by the Hydrographer of the United States, shows that the month of May was characterized by generally fair weather, and, with the exception of one day, by the absence of storms of great violence. Much fog was encountered during the month, and seriously interfered with commerce in the vicinity of New Jersey and New York. Icebergs were met with in large quantities between longitude 40° and 51°, north of latitude 46°. The approach of the hurricane season in the West Indies was marked by two well-defined depressions on the 4th and 17th respectively.

IT appears that the somewhat eccentric weather of Western Europe during the present year finds a parallel both in China and Japan, where people complain bitterly of the sudden changes of temperature, the premature heat followed by cold "snatches," the storms in quick succession and of great intensity. Thus, the *Chinese Times* of Tientsin, one of the most northern parts of China, says that since foreigners have had any connection with the place there has not been known such an inclement spring. A warm week in February broke up the ice on the Peiho River prematurely, but afterwards cold set in with great severity, and March was characterized by a succession of gales, lasting sometimes a week without intermission, and as late as the 24th the ground was covered with snow. As a rule, the country people never can have enough of snow, which they consider has a most benignant effect on the soil, but the snowfall this spring was so unusual that at last the farmers cried out that they had had too much of it.

THE *Glasgow Herald* states that last year, while some workmen were engaged in drainage operations at Lochavullin for the purpose of forming a public park, they discovered what was believed to be an old "crannog" or lake-dwelling, and several experts who visited it were of opinion that it was a very good specimen of an ancient lake-dwelling. Arrangements were made by the Town Council for its being properly investigated and preserved as far as possible, but the weather has rendered operations impracticable till within the last few days. Workmen are now engaged in excavating round the place, and recently it was visited by Mr. Cochran-Patrick, Under-Secretary for Scotland, and other gentlemen interested. Among the articles turned up by the workmen during the examination were a stone bullet, such as would have been used in the slings of the period to which the dwelling is supposed to have belonged, and portions of the wattle used in the construction of the dwelling. Prof. Hedley, of St. Andrews, took some photographs of the place.

MR. H. B. CRESSON, of Philadelphia, has been studying certain stakes or piles, which were first pointed out to him nearly twenty years ago, by a fisherman, in the mud at the mouth of Naaman's Creek, a small tributary of the Delaware River. These piles are the first indication of anything in North America resembling the remains of lake-dwellings in Europe. Prof. F. W. Putnam, in his twenty-second Annual Report relating to the work of the Peabody Museum, says that Mr. Cresson's recent investigations led to the discovery of three distinct localities, near each other, which he designated Stations A, B, and C. Around these stations were found a very important and instructive collection of stone implements, a few points and fragments of bone, and a human tooth. At one station a number of fragments of rude pottery were found, and at this were obtained several pile-ends which are now in the Museum. This collection Mr. Cresson has given to the Museum, and he proposes soon to prepare a full account of his discoveries for publication. The Museum is also indebted to Mr. A. B. Huey, of Philadelphia, for a number of specimens which he obtained while with Mr. Cresson during the examination of Station B, and to Mr. W. R. Thompson, of Philadelphia, for several potsherds, and a large stone maul with a hole drilled through it, from the same station.

MR. A. E. BROWN, Superintendent of the Philadelphia Zoological Garden, says in his last Report that among the most valued additions to the collection of reptiles, during the past year, were five iguanas from the Isle of Pines, West Indies. These were at once seen to be different from any previously in the collection, and were subsequently identified by Prof. E. D. Cope as *Cyclura nubila*, Gray. The habit noticeable among the iguanas, of remaining fixed in one position when the attention is excited, or of "striking attitudes," is specially marked in these animals, and, several of them being of large size, they have attracted considerable attention. They are of an aggressive disposition, and cannot be readily handled, as they strike blows of astonishing force with their long tails, and bite with great tenacity any object with which they are disturbed. As with the better-known iguanas, their most suitable food in captivity appears to be bananas, hens' eggs, and milk.

IN the same Report, Mr. Brown says that the Philadelphia Zoological Society lately received, from the proprietor of a menagerie, a splendid male elephant called "Bolivar." The animal came originally from Ceylon, is now about thirty years old, stands nearly 10 feet in height at the shoulder, and weighs nearly 10,000 pounds. "It may well be doubted," says Mr. Brown, "if a finer specimen of his race has ever been included in a zoological collection."

MESSRS. BLACKIE AND SON have issued the second volume of their excellent "Modern Cyclopædia of Universal Information," edited by Dr. Charles Annandale. The present volume, if we may judge from the articles we have examined, is in all respects equal to the first, which we have already noticed.

WE have received from Tashkent an interesting Russian work, by A. Wilkins, on the culture of the American cotton-tree in Russian Turkestan. It appears that, though the first attempts at cultivating the *Gossypium hirsutum* in Central Asia proved unsuccessful, a new attempt, made since 1884, under the leadership of the Tashkent model farm, and with seeds taken from the continental States of America, has proved to be a real success. In 1887, there were no less than 38,700 acres under that crop in Turkestan, and in the following year the area was trebled. The crop of 1887 was estimated at 68,000 cwts. of raw cotton. Besides giving practical advice for the culture of the American cotton-tree, M. Wilkins's book contains valuable information about the climate of Turkestan, analyses of the soil and so on, from which it appears that, although the American species can be cultivated about Tashkent, where from 214 to 237 days every year are without frost, its real domain will be on the banks of the Zerafshan and the lower Amu-Daria, and in the Transcaspian region. It is also worthy of note that a new interesting variety of *Gossypium hirsutum*, differentiated by the fact that its flowers grow in groups of two, three, and four on a common stalk, has been obtained at the Tashkent model farm.

THE additions to the Zoological Society's Gardens during the past week include two Prairie Wolves (*Canis latrans* ♂ ♀) from the Rocky Mountains, presented by Mr. Charles Martin; two Long-fronted Gerbilles (*Gerbillus longifrons*) from Western Asia, presented by Lieut.-General Sir Harry B. Lumsden, K.C.S.I.; a Chattering Lory (*Lorius garrulus*) from Moluccas, presented by Mr. Thomas Taylor; two Slender-billed Cockatoos (*Licmetis tenuirostris*) from South Australia, two Goffin's Cockatoos (*Cacatua goffini*), habitat uncertain, presented by Dr. Seton; two Razorbills (*Alca torda*), British, presented by Dr. B. Hewetson; two Viperine Snakes (*Tropidonotus viperinus*), three Green Lizards (*Lacerta viridis*), two Marbled Newts (*Molge marmorata*), two Spotted Salamanders (*Salamandra maculosa*), two Edible Frogs (*Rana esculenta*), three Green Tree-Frogs (*Hyla arborea*) from Southern France, presented by the Rev. F. H. Holmes; a Smooth Snake (*Coronella lævis*) from Southern France, presented by Miss Agnes Flemyng; a Coconut Crab (*Birgus latro* ♂) from India, presented by Commander Alfred Carpenter, R.N.; two Nicobar Pigeons (*Calœnas nicobarica* ♂ ♀) from the Indian Archipelago, a Collared Peccary (*Dicotyles tajaçu*) from South America, three Australian Waxbills (*Estrelda temporalis*) from Australia, purchased; three New Zealand Parakeets (*Cyanorhamphus novæ-zealandiæ*) from New Zealand, received in exchange; a Black Lemur (*Lemur macaco*), an Axis Deer (*Cervus axis* ♀), born in the Gardens.

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## *OUR ASTRONOMICAL COLUMN.*

TWO REMARKABLE CONJUNCTIONS.—Mr. Marth called the attention of the Royal Astronomical Society at its last meeting, on June 14, to two remarkable conjunctions which will occur in the autumn of the present year, and which should be most carefully watched by astronomers the world over. The first is the conjunction of Mars and Saturn on September 20, at 20h. G.M.T., the closest conjunction of the two planets on record, the geocentric distance being only 54″, so that to the naked eye the two stars would probably appear to coalesce. The conjunction is rendered the more interesting from its occurring in the near neighbourhood of Regulus, which will be distant only 4′ of arc; whilst Venus passes over the same region of the sky three days later, passing within 12′ of Regulus. The conjunction of Mars with the Saturnian system on September 20 will be so close that it will have a very narrow escape of occulting Iapetus, the two being 12″ apart at 22h.